

# Vacuum Generation - Combination Pump Systems chemvac

## Combination Pump Systems chemvac

The combination of a diaphragm pump with a rotary vane pump was developed to take advantage of the strong points of each type of pump. The chemical diaphragm pump can withstand corrosive gases and remove the resulting condensate prior to its absorption in the double stage rotary vane pump oil by constantly distilling the oil during operation. The rotary vane pump provides a much lower ultimate vacuum and will have a long life with the pump oil being free of contaminants.

A common problem with applications in the fine vacuum range is the use of oil sealed pumps which are not sufficiently tolerant of chemical vapor. Diaphragm pumps can not provide the ultimate pressure required (between 1 and 0.001 mbar). Here the chemvac combination pumps are the solution.

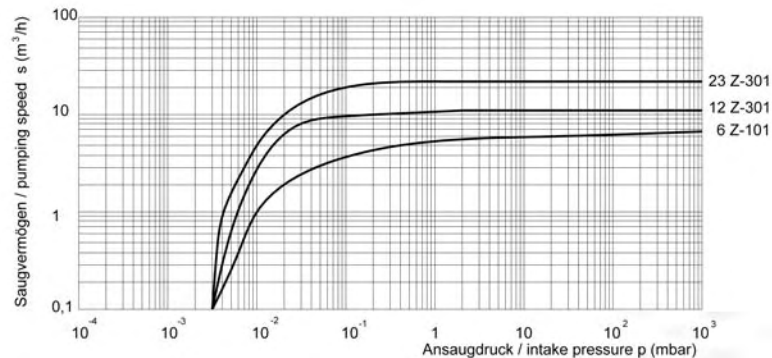
### Ranges of application:

For the fine vacuum range in special applications, e.g.

- for aggressive gases and vapors
- for evacuation of solvent recovery vapors
- for pumping of vapors which are soluble in oil

chemvac Combination Pump Systems are used for producing fine vacuum. They are corrosion optimized combinations of a two stage rotary vane pump and a chemically resistant diaphragm pump. The suction-side of the rotary vane pump is connected with the recipient for its evacuation. The integrated diaphragm pump evacuates the interior of the oil housing of the rotary vane pump. This negative pressure prevents the condensation of gases exhausted via the operation valve of the rotary vane pump and transports these over a separator system into the exhaust air. The result is a pump system with the vacuum capabilities of a rotary vane pump combined with the solvent and acid handling capabilities of a PTFE diaphragm pump.

In addition to the following standard range we offer on request further combination pump systems. Systems with different mains voltage and frequency on request.



### Special characteristics:

- operates at the pumping speed of the rotary vane pump
- longer oil exchange intervals
- reduced corrosion
- simple pressure condensation after the diaphragm pump
- no use of a suction side cold trap in most cases

In addition to the following standard range we offer on request further combination pump systems. Systems with different mains voltage and frequency on request.

### Scope of delivery:

chemvac Combination Pump System complete with oil charging switch, KF small flange connections, centering and clamp rings.



### Technical Features

Type	Ult. pressure pneurop mbar	Pumping speed pneurop 50/60 Hz m <sup>3</sup> /h	l/min	Dim. (W/D/H) mm	Weight kg
6 Z - 101 chemvac	2x10 <sup>-3</sup>	5.8/6.6	97/110	500/300/340	25.5
12 Z - 301 chemvac	2x10 <sup>-3</sup>	11.0/13.2	183/220	590/310/420	42.5
23 Z - 301 chemvac	2x10 <sup>-3</sup>	21.0/25.2	350/420	590/310/420	46.0

### Ordering Information

Type	Mains supply V / Hz	Mandatory accessories Connection cable	PU pcs.	Order-No.
6 Z - 101 chemvac	230 / 50/60	yes	1	109023
6 Z - 101 chemvac	115 / 50/60	yes	1	109023-01
12 Z - 301 chemvac	230 / 50/60	yes	1	109024
12 Z - 301 chemvac	115 / 50/60	yes	1	109024-01
23 Z - 301 chemvac	230 / 50/60	yes	1	109025
23 Z - 301 chemvac	115 / 50/60	yes	1	109025-01

Note:  
Country specific  
mains connection  
cable separately  
to the device, see  
page 146.